

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

SYNOPSYS, INC,

No. C03-02289 MJJ

Plaintiff,

**ORDER DENYING DEFENDANTS’
MOTION FOR PARTIAL SUMMARY
JUDGMENT FOR NON-
INFRINGEMENT UNDER 271(G)**

v.

RICOH COMPANY, LTD,

Defendant.

INTRODUCTION

Before the Court is Aeroflex Incorporated, AMI Semiconductor, Inc., Matrox Electronic Systems, Ltd., Matrox Graphics, Inc., Matrox International Corp., Matrox Tech, Inc. and Aeroflex Colorado Springs, Inc.’s (“Defendants”) Motion for Summary Judgment of Non-Infringement Under 35 U.S.C. § 271(g). The motion is opposed by Ricoh Company, Ltd. (“Plaintiff”).

For the following reasons, the Court **DENIES** Defendants’ Motion for Partial Summary Judgment.

FACTUAL BACKGROUND

This case concerns the alleged infringement of U.S. Patent Number 4,922,432 (“the ‘432 patent”) entitled “Knowledge Based Method and Apparatus for Designing Integrated Circuits Using Functional Specifications.” Defendants ask the Court to hold that claims 13 through 17 of the ‘432

1 patent do not infringe under 35 U.S.C. § 271(g).

2 The '432 patent, owned by Ricoh, claims methods for using a computer aided design
3 ("CAD") system for designing a type of specialized microchip known as an application specific
4 integrated circuit ("ASIC"). "An [ASIC] is an integrated circuit chip designed to perform a specific
5 function, as distinguished from standard, general purpose integrated circuit chips, such as
6 microprocessors, memory chips, etc." '432 patent, col. 1:13-17. According to the '432 patent, ASIC
7 design without the aid of CAD systems is extremely complicated. This manual process requires the
8 designer to define the structural level design specification for that ASIC. This specification
9 describes the various hardware components and their required interconnections, as well as a system
10 controller for synchronizing the operations of those hardware components. This process requires an
11 ASIC designer to have an "extensive and all encompassing knowledge" of specific hardware
12 components and their required interconnections. '432 patent, col. 1:28-31. There are only a small
13 number of very large scale integration technology (VLSI) designers who possess the highly
14 specialized skills needed to create structural level integrated circuit hardware descriptions manually.

15 The stated goal of the '432 patent's claimed invention is to enable the non-expert designer to
16 design ASICs. The '432 patent claims a method for enabling designers to describe ASIC
17 specifications at a functional level. This functional level description is done without specification of
18 structure, implementing technology, or architecture. This process involves taking architecture
19 independent specifications and selecting previously designed circuit components used as building
20 blocks for implementing an ASIC. The process selects the optimum hardware cells to be included in
21 the desired ASIC. Following this method, a user who does not have expertise in VLSI design can
22 write architecture independent ASIC descriptions without having to specify the underlying hardware
23 components. The claimed system automatically selects the appropriate hardware to be used in the
24 ASIC.

25 On April 7, 2005, the Court issued a Claim Construction Order ("Claims Construction"),
26 Docket No. 296) construing the language of Claim 13 of the '432 patent. Defendants brought the
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1 instant summary judgment motion, asking the Court to hold that Claims 13-17¹ of the '432 patent do
2 not infringe under § 271(g).

3 4 LEGAL STANDARD

5 Rule 56(c) of the Federal Rules of Civil Procedure authorizes summary judgment if there is
6 no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of
7 law. *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986). The moving party bears the
8 initial burden of demonstrating the basis for the motion and identifying the portions of the pleadings,
9 depositions, answers to interrogatories, affidavits, and admissions on file that establish the absence
10 of a triable issue of material fact. *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). If the moving
11 party meets this initial burden, the burden then shifts to the non-moving party to present specific
12 facts showing that there is a genuine issue for trial. Fed. R. Civ. P. 56(e); *Celotex*, 477 U.S. at 324;

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14 ¹ The claims at issue in the '432 patent read as follows:

15 13. A computer-aided design process for designing an application specific integrated circuit which will perform
16 a desired function comprising storing a set of definitions of architecture independent actions and conditions;
17 storing data describing a set of available integrated circuit hardware cells for performing the actions and conditions
18 defined in the stored set;
19 storing in an expert system knowledge base a set of rules for selecting hardware cells to perform the actions and
20 conditions;
21 describing for a proposed application specific integrated circuit a series of architecture independent actions and
22 conditions;
23 specifying for each described action and condition of the series one of said stored definitions which corresponds
24 to the desired action or condition to be performed;
25 and selecting from said stored data for each of the specified definitions a corresponding integrated circuit hardware
26 cell for performing the desired function of the application specific integrated circuit, said step of selecting a
27 hardware cell comprising applying to the specified definition of the action or condition to be performed, a set of
28 cell selection rules stored in said expert system knowledge base and generating for the selected integrated circuit
hardware cells, a netlist defining the hardware cells which are needed to perform the desired function of the
integrated circuit and the interconnection requirements therefor.

14. A process as defined in claim 13, including generating from the netlist the mask data required to produce an
integrated circuit having the desired function.

15. A process as defined in claim 13 including the further step of generating data paths for the selected integrated
circuit hardware cells.

16. A process as defined in claim 15 wherein said step of generating data paths comprises applying to the selected
cells a set of data path rules stored in a knowledge base and generating the data paths therefrom.

17. A process as defined in claim 16 including the further step of generating control paths for the selected
integrated circuit hardware cells.

1 *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586-87 (1986). The non-movant's
 2 bare assertions, standing alone, are insufficient to create a material issue of fact and defeat a motion
 3 for summary judgment. *Id.* at 247-48. An issue of fact is material if, under the substantive law of
 4 the case, resolution of the factual dispute might affect the case's outcome. *Anderson*, 477 U.S. at
 5 248. Factual disputes are genuine if they "properly can be resolved in favor of either party." *Id.* at
 6 250. Thus, a genuine issue for trial exists if the non-movant presents evidence from which a
 7 reasonable jury, viewing the evidence in the light most favorable to that party, could resolve the
 8 material issue in his or her favor. *Id.* "If the evidence is merely colorable, or is not significantly
 9 probative, summary judgment may be granted." *Id.* at 249-50 (internal citations omitted).

11 ANALYSIS

12 A. Defendants' Argument That 271(g) Infringement is Precluded Because the Processes at 13 Issue Do Not Generate Physical Goods

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 15 Defendants first argue that claims 13 through 17 of the '432 patent are incapable of
 16 infringing under § 271(g) as a matter of law under *Bayer AG v. Housey Pharms., Inc.*, 340 F.3d 1367
 17 (Fed. Cir. 2003). Section 271(g) provides that, "[w]hoever without authority imports into the United
 18 States or offers to sell, sells, or uses within the United States a *product which is made by a process*
 19 patented in the United States shall be liable as an infringer, if the importation, offer to sell, sale, or
 20 use of the product occurs during the term of such process patent." (emphasis added). In other words,
 21 one who produces a product abroad using a patented process, and then imports, sells, or uses that
 22 product into the United States, infringes the patent under § 271(g)². Section 271(g) closed a
 23 loophole in the patent system. Prior to the enactment of the provision, patent holders had no
 24 recourse against those who manufactured goods abroad using patented methods, and then imported

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 26 ²Infringement is subject to certain statutory exceptions not relevant to the current case. Section 271(g) continues,
 27 "In an action for infringement of a process patent, no remedy may be granted for infringement on account of the
 28 noncommercial use or retail sale of a product unless there is no adequate remedy under this title for infringement on account
 of the importation or other use, offer to sell, or sale of that product. A product which is made by a patented process will, for
 purposes of this title, not be considered to be so made after--(1) it is materially changed by subsequent processes; or (2) it
 becomes a trivial and nonessential component of another product."

1 those goods to the United States. See *Ajinomoto Co. v. Archer-Daniels-Midland Co.*, 228 F.3d
2 1338, 1347 (Fed. Cir. 2000).

3 Defendants urge the Court to read *Bayer* to stand for the proposition that any method patent
4 which generates data is incapable of infringing under § 271(g). In *Bayer*, the patents at issue
5 described a method of screening biological substances. Applying this screening method, users
6 could determine which substances had the capability of inducing or inhibiting protein production in
7 cells. Ultimately, the process generated screening data which could be used to determine which
8 substances should be targeted in order to produce specific proteins. Housey, the patent-holder in
9 *Bayer*, argued that Bayer infringed under § 271(g) when Bayer imported the screening data into the
10 United States. The *Bayer* court rejected this argument, holding that infringement under § 271(g)
11 applies to physical goods and not to data. *Bayer* at 1368, 1371-1377. The court noted that it was the
12 intent of Congress that § 271(g) apply to *physical goods* created through a manufacturing process.³
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14 Defendants assert that the claims at issue in the instant case produce only data specifying
15 the design of ASIC chips. For instance, the method in Claim 13 generates “a *netlist* defining the
16 hardware cells which are needed to perform the desired function of the integrated circuit and the
17 interconnection requirements therefor.” A “netlist”, Defendants maintain, is merely a structured
18 list of components and their connections. Similarly, Claim 14 produces “mask data”, Claims 15
19 and 16 produce “data paths”, and Claim 17 produces “control paths”, which are all lists of data
20 according to Defendants. Defendants then point to language in the Claim Construction Order in
21 which the Court found that “the ‘computer-aided design process’ described in Claim 13 does not
22 include a manufacturing process for ASICS.” Defendants argue that since the Court construed
23 the claims not to include the manufacturing process, then, as a matter of law, the processes have
24 been deemed to produce only data. Under *Bayer*, Defendants contend, method patents which
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26 ³The *Bayer* court thoroughly examined the legislative history of the Process Patents Amendments Act, and
27 determined that it was Congress’s intent that “product” under § 271(g) only refer to physical, manufactured products, and
28 not information. As the *Bayer* court noted, “[u]nder these circumstances we think it is best to leave to Congress the task of
expanding the statute if we are wrong in our interpretation. Congress is in a far better position to draw the lines that must
be drawn if the product of intellectual processes rather than manufacturing processes are to be included within the statute.”
Bayer at 1376-77.

1 produce only data cannot infringe 271(g) as a matter of law.

2 The Court does not agree with Defendants. Under Defendants' reading of *Bayer*, method
3 patents which produce only data could never infringe under 271(g). This is contrary to the *Bayer*
4 court's own analysis of a separate infringement argument asserted by Housey. Housey argued
5 that even if the act of importing screening data could not result in infringement under § 271(g),
6 Bayer infringed when it sold pharmaceuticals⁴ which contained substances identified by the
7 screening data. Housey contended that these pharmaceuticals were "made by" the patented
8 pursuant to § 271(g) since the screening data was used to identify the substances contained
9 within. The court in that case used the framework laid out in *Bio-Technology Gen. Corp. v.*
10 *Genentech, Inc.*, 80 F.3d 1553 (Fed. Cir. 1996), to determine whether the pharmaceutical products
11 were products "made by [the patented] process." Under *Bio-Technology* courts must, on a case
12 by case basis, examine the proximity between the process patent at issue and the product to
13 determine if the product is made by the process. *Bio-Technology*, 80 F.3d at 1561. The *Bayer*
14 court found that the screening method was "a predicate process to identify the product to be
15 manufactured" rather than a direct part of the manufacturing process for the pharmaceuticals.
16 *Bayer*, 340 F.3d at 1377-78. As such, the *Bayer* court reasoned that there was not a close enough
17 relationship between the screening data and the production of the pharmaceuticals that the
18 generation of screening data could be considered a process "used directly in the manufacture" of
19 the pharmaceuticals. *Id.* at 1378.

20 As *Bayer* demonstrates, even a method patent which on the face of the claim language
21 appears only to produce data is capable of infringement under § 271(g) if it is deemed to have
22 been "used directly in the manufacture of [a physical] product." *Id.* 1378. Were this not the case,
23 the *Bayer* court would not have conducted the *Bio-Technology* analysis to determine if the
24 pharmaceutical products were "made by" the screening method for the purposes of § 217(g).
25 Clearly then, a process which produces only data is capable of infringing under § 271(1), perhaps
26 as part of a manufacturing process, if it is directly used in the manufacture of a physical product.

27 Defendants confuse *Bayer's* two holdings, each of which addressed different infringement
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⁴Both parties agreed that pharmaceuticals were physical goods for the purposes of § 271(g).

1 allegations. The infringement allegation which lead the court to conclude that § 271(g) does not
 2 apply to the importation of data read, “Bayer AB is liable as an infringer when it imports into the
 3 United States *research data or information* obtained from using the...patented methods.” *Bayer*,
 4 340 F3d at 1370 (emphasis added). The “product” at issue under that allegation was “research
 5 data or information.” Here, by contrast, there is no such allegation that Defendants infringed
 6 under § 271(g) by importing information. The “product” at issue in the current case are ASIC
 7 chips, which the parties do not dispute are physical goods.⁵

8 Defendants are incorrect in their assertion that *Bayer* stands for the proposition that
 9 process patents which generate only data cannot infringe as a matter of law under § 271(g). Such
 10 patents are capable of infringement under § 271(g) if they are used directly in the manufacture of
 11 a physical product. *Id.* at 1377-78. Accordingly, the Court is incapable of resolving the issue of
 12 infringement based upon the language of the claims alone. Under *Bayer*, a proper analysis
 13 requires the Court to determine if the product alleged to have infringed under § 271(g) is a
 14 physical good, and if so, examine the relationship between the process at issue and the physical
 15 product to determine if the product was “made by” the patented process.

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 17 **B. Defendants’ Argument That 271(g) Infringement is Precluded Because the Methods**
 18 **in Claims 13-17 are Not Used Directly in the Manufacture of Physical Products**
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20 The Court must next examine whether the processes at issue are directly used in the
 21 manufacturing process of ASIC chips to determine if the chips are “made by” these processes for
 22 the purposes of § 271(g). In order to determine whether a product is “made by a process”, courts
 23 must, on a case by case basis, examine the relationship between “the ‘process patented in the
 24 United States’ and the resulting product.” *Bayer*, 340 F.3d at 1377-78; *Bio-Technology*, 80 F.3d
 25 at 1561. Defendants contend that there are so many processes which take place in between the
 26 generation of ASIC design data and the production of ASIC chips that the Court could not

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 28 ⁵*Contrast NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1314 (Fed. Cir. 2005). Unlike the current case,
 in *NTP*, the product “made by” the patents at issue, and which was the subject of infringement allegations under § 271(g)
 as to importation into the U.S., was wireless, electronic mail, a wholly non-physical product.

1 consider the claimed design processes a part of the manufacture of ASIC chips.

2 Defendants lay out the steps in between the generation of netlists and mask data and the
3 subsequent production of physical chips. According to Defendants, there are at least four
4 processes which must occur before mask data can be generated from netlist data, and in turn at
5 least seven complex processes that must occur before a physical mask can be generated. Once the
6 physical mask is generated, chip manufacture can proceed, which includes the processes of wafer
7 fabrication, assembly and testing. Defendants argue that given the many steps which must occur
8 before ASIC chips can be produced from design data, the processes at issue cannot be considered
9 a direct part of the manufacture of the chips.⁶ Plaintiff contests the issue, arguing that ASIC
10 design is an integral and direct part of ASIC production.⁷ Plaintiff asserts that Defendants
11 actually incorporate and use the netlist and mask data in manufacturing of ASIC chips.

12 The processes in the instant case are distinguishable from those before the court in *Bayer*.
13 The *Bayer* court explained that the screening process at issue in that case was not a direct part of
14 the manufacturing process because it was merely a “predicate process to identify the product to be
15 manufactured.” *Bayer* 340 F.3d at 1378. In the instant case, there is a stronger relationship
16 between the process and the product than there was in *Bayer*. Thus, the Court can not conclude as
17 easily as did the court in *Bayer* that the processes as allegedly practiced by Defendants were
18 clearly separate from the ASIC manufacturing process.

19 The proximity between the patented process and the physical product is a fact intensive
20 inquiry. Since the facts concerning the relationship between the methods and the manufacturing
21 process are in dispute, the Court does not agree with Defendants’ characterization that the issue is
22 clear. Accordingly, given the record before the Court, the Court must **DENY** Defendants’
23 Motion for Partial Summary Judgment.

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25 ⁶Defendants point to the fact that the Court has construed the language of claim 13 to not include the manufacture
26 of ASIC chips. Based upon this, Defendants argue that the Court has already determined that the patented process is not
27 directly involved in the manufacture of physical products for the purpose of § 271(g). Defendants’ argument is misplaced.
The Claim Construction Order speaks only to the scope of the patent claims, in other word, the metes and bounds of the
claimed invention. The Court’s finding does not address the issue of whether the patented process is actually *used* in the
manufacture of products.

28 ⁷Plaintiff also argues that this same issue was previously heard and decided by the Court in an earlier order. The
Court disagrees. At that time the Court had not construed the meaning of the claims at issue.


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CONCLUSION

For the foregoing reasons, the Court **DENIES** Defendants' Motion for Partial Summary Judgment.

IT IS SO ORDERED.

Dated: November 7, 2005



MARTIN J. JENKINS
UNITED STATES DISTRICT JUDGE